

ABSTRACT OF THE DISCLOSURE

The present invention provides an electronically-controlled fuel injector, for an internal combustion engine, comprising a downstream fuel injection valve located near an air intake port of each cylinder or inside a cylinder, an air intake passage which bypasses the throttle valve located upstream of a downstream fuel injection valve, and a fuel vaporizing section including an upstream fuel injection valve, and a heater which vaporizes fuel injected from the upstream fuel injection valve; and further having an air intake port located upstream of the throttle valve, air flow control section for controlling an amount of air, said fuel vaporizing section, vaporized-fuel branch section for supplying vaporized fuel to each cylinder, and a vaporized-fuel distribution passage which extends from the vaporized-fuel branch section to an opening located in each air intake pipe located downstream of the throttle valve.